

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

- 1 1. (Currently amended) A method for validating a resource record in a
2 local cache at a client computer system within a network, comprising:
3 retrieving the resource record ~~from the local cache~~ at the client;
4 issuing one or more queries for the resource record;
5 waiting for a response to the query; and
6 if the response to the query is not received in a pre-determined amount of
7 time, invalidating the resource record at the client, wherein invalidating the
8 resource record involves deleting the resource record.
- 1 2 (Canceled).
- 1 3. (Original) The method of claim 1, further comprising:
2 receiving a multicast message from a second client querying a second
3 device;
4 locating a second resource record associated with the second device;
5 waiting for a multicast response to the multicast query; and
6 if after a pre-determined number of queries the multicast response to the
7 multicast query is not received in the pre-determined amount of time, invalidating
8 the second resource record.

1 4. (Original) The method of claim 1, wherein invalidating the resource
2 record further comprises invalidating a child record of the resource record.

1 5. (Original) The method of claim 1, wherein if the response to the query
2 is not received in a pre-determined amount of time, the method further comprises:
3 retrieving a parent record of the resource record at the client, wherein the
4 parent record refers to the resource record;
5 issuing a query for the parent record;
6 waiting for a response to the query from the device; and
7 if the response to the query is not received in a pre-determined amount of
8 time, invalidating the parent record, and then repeating the above process by
9 applying it recursively to any records that refer to the now-invalidated parent
10 record.

1 6. (Original) The method of claim 1, wherein if the response to the query
2 is not received in a pre-determined amount of time, the method further comprises:
3 retrieving a parent record of the resource record at the client, wherein the
4 parent record refers to the resource record;
5 issuing a query for the parent record;
6 receiving a response to the query from the device, wherein the response
7 includes information for updating the resource record; and
8 updating the resource record with the information received in the response.

1 7. (Original) The method of claim 6, wherein the method further
2 comprises updating the parent record with the information received in the
3 response.

1 8. (Original) The method of claim 1, wherein the method is invoked at a
2 pre-specified time interval.

1 9. (Currently amended) A computer-readable storage medium storing
2 instructions that when executed by a computer cause the computer to perform a
3 method for validating a resource record in a local cache at a client computer
4 system within a network, the method comprising:
5 retrieving the resource record from the local cache at the client;
6 issuing one or more queries for the resource record;
7 waiting for a response to the query; and
8 if the response to the query is not received in a pre-determined amount of
9 time, invalidating the resource record at the client, wherein invalidating the
10 resource record involves deleting the resource record.

1 10 (Canceled).

1 11. (Original) The computer-readable storage medium of claim 9, wherein
2 the method further comprises:
3 receiving a multicast message from a second client querying a second
4 device;
5 locating a second resource record associated with the second device;
6 waiting for a multicast response to the multicast query; and
7 if after a pre-determined number of queries the multicast response to the
8 multicast query is not received in the pre-determined amount of time, invalidating
9 the second resource record.

1 12. (Original) The computer-readable storage medium of claim 9, wherein
2 invalidating the resource record further comprises invalidating a child record of
3 the resource record.

1 13. (Original) The computer-readable storage medium of claim 9, wherein
2 if the response to the query is not received in a pre-determined amount of time,
3 the method further comprises:
4 retrieving a parent record of the resource record at the client, wherein the
5 parent record refers to the resource record;
6 issuing a query for the parent record;
7 waiting for a response to the query from the device; and
8 if the response to the query is not received in a pre-determined amount of
9 time, invalidating the parent record, and then repeating the above process by
10 applying it recursively to any records that refer to the now-invalidated parent
11 record.

1 14. (Original) The computer-readable storage medium of claim 9, wherein
2 if the response to the query is not received in a pre-determined amount of time,
3 the method further comprises:
4 retrieving a parent record of the resource record at the client, wherein the
5 parent record refers to the resource record;
6 issuing a query for the parent record;
7 receiving a response to the query from the device, wherein the response
8 includes information for updating the resource record; and
9 updating the resource record with the information received in the response.

1 15. (Original) The computer-readable storage medium of claim 14,
2 wherein the method further comprises updating the parent record with the
3 information received in the response.

1 16. (Original) The computer-readable storage medium of claim 9, wherein
2 the method is invoked at a pre-specified time interval.

1 17. (Currently amended) An apparatus that validates a resource record in a
2 local cache at a client computer system within a network, comprising:
3 a retrieval mechanism at the client configured to retrieve the resource
4 record from the local cache at the client; and
5 an invalidation mechanism configured to,
6 issue one or more queries for the resource record,
7 wait for a response to the query, and
8 if the response to the query is not received in a pre-
9 determined amount of time, to invalidate the resource record at the
10 client, wherein invalidating the resource record involves deleting
11 the resource record.

1 18 (Canceled).

1 19. (Original) The apparatus of claim 17, wherein the invalidation
2 mechanism is configured to:
3 receive a multicast message from a second client querying a second
4 device;
5 locate a second resource record associated with the second device;
6 wait for a multicast response to the multicast query; and

7 if after a pre-determined number of queries the multicast response to the
8 multicast query is not received in the pre-determined amount of time, to invalidate
9 the second resource record.

1 20. (Original) The apparatus of claim 17, wherein invalidating the
2 resource record further comprises invalidating a child record of the resource
3 record.

1 21. (Original) The apparatus of claim 17, wherein if the response to the
2 query is not received in a pre-determined amount of time, the invalidation
3 mechanism is additionally configured to:
4 retrieve a parent record of the resource record at the client, wherein the
5 parent record refers to the resource record;
6 issue a query for the parent record;
7 wait for a response to the query from the device; and
8 if the response to the query is not received in a pre-determined amount of
9 time, to invalidate the parent record, and to then repeat the above process by
10 applying it recursively to any records that refer to the now-invalidated parent
11 record.

1 22. (Original) The apparatus of claim 17, further comprising an updating
2 mechanism, wherein if the response to the query is not received in a pre-
3 determined amount of time, the updating mechanism is configured to:
4 retrieve a parent record of the resource record at the client, wherein the
5 parent record refers to the resource record;
6 issue a query for the parent record;
7 receive a response to the query from the device, wherein the response
8 includes information for updating the resource record; and to

9 update the resource record with the information received in the response.

1 23. (Original) The apparatus of claim 22, wherein the updating
2 mechanism is additionally configured to update the parent record with the
3 information received in the response.

1 24. (Original) The apparatus of claim 17, wherein the apparatus is
2 invoked at a pre-specified time interval.

1 25–34. (Canceled)